UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
YIGDALL, MICHAEL J

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 December 2007*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-12,15-22,25-27 and 30* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1,2,5-12,15-22,25-27 and 30* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on December 3, 2007 has been entered. Claims 1,

2, 5-12, 15-22, 25-27 and 30 are pending.

Response to Arguments

2.   Applicant's arguments have been fully considered but they are not persuasive.

Applicant contends that if Imamatsu does not describe storing first target code from a

first target sector in a save-area of non-volatile memory prior to storing a first block of

replacement code into the first target sector, then Imamatsu does not describe storing a parameter

indicating that the first target code from the first target sector was successfully stored in the save-

area of the non-volatile memory (remarks, page 13).

However, the rejections are based on a combination of Imamatsu and Äijä. As set forth

in the Office action, Imamatsu teaches a journal stored in non-volatile memory that includes

status information (see, for example, version management domain 42 in FIG. 5). Imamatsu

further teaches that the main processor updates the status information (see, for example, column

7, line 50 to column 8, line 32). The status information includes several parameters, such as a

version-write completion flag, a sector-buffer-write completion flag, and an update completion

flag (see, for example, column 8, lines 24-32). The sector-buffer-write completion flag, for

example, "indicates whether the update-used software for partial updating has been written into the sector buffer 44a" (column 8, lines 27-29).

Applicant does not dispute that Äijä teaches or suggests a main processor capable of storing first target code from a first target sector in a save-area of non-volatile memory prior to storing a first block of replacement code into the first target sector (remarks, page 12). Thus, given the combined teachings of the references, it follows that one of ordinary skill in art could, with predictable results, incorporate into the status information of Imamatsu a parameter indicating that the first target code from the first target sector was successfully stored in the save-area of the non-volatile memory. Such a parameter, which could be referred to as a save-area-write completion flag, for example, would be analogous to the sector-buffer-write completion flag that Imamatsu already describes. Furthermore, Äijä teaches storing an indication that the operation is complete in non-volatile memory (see, for example, column 5, lines 25-27), and therefore suggests such a parameter.

Accordingly, the combined teachings of the references would have suggested the claimed subject matter to those of ordinary skill in the art. Indeed, the test for obviousness is not that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant contends that the examiner "has not described in Imamatsu, Äijä, or the combination of Imamatsu and Äijä that a person of skill in the art would solve by adding the storage of such a parameter to the combination of Imamatsu and Äijä," and further contends that

instead, "the motivation to store such a parameter comes from Applicants' own specification"

(remarks, page 13).

However, in Imamatsu, the flags control the update decision process (see, for example,

steps S13, S14 and S16 in FIG. 10). The save-area-write-completion flag would serve the same

function. Furthermore, Äijä describes that storing such a parameter would enable the device to

determine whether the operation was interrupted before completion (see, for example, column 5,

lines 2-4). Moreover, the examiner notes that a rigid application of the "teaching, suggestion, or

motivation" test is not necessary to support a conclusion of obviousness. See *KSR International*

Co. v. Teleflex Inc., 550 U.S. ___, 82 USPQ2d 1385 (2007).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1, 2, 5-12, 15-22, 25-27 and 30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent No. 6,687,901 to Imamatsu (art of record, "Imamatsu") in view of

U.S. Patent No. 6,928,579 to Äijä (art of record, "Äijä").

With respect to claim 1 (currently amended), Imamatsu teaches a wireless

communication device (see, for example, mobile terminal device 10 in FIG. 3) capable of

downloading a software update file from a wireless network (see, for example, the abstract), said

wireless communication device comprising:

a non-volatile memory capable of being re-programmed by sectors (see, for example,

flash ROM 33 in FIG. 4A), wherein said non-volatile memory stores: (1) a target file to be

updated (see, for example, control-software 43 in FIG. 4A), (2) said downloaded software update

file (see, for example, download buffer 44 in FIG. 4A and column 6, lines 62-64), and (3) a

journal comprising a plurality of entries, each of said plurality of entries containing status

information associated with a re-programmed sector of said non-volatile memory (see, for

example, version management domain 42 in FIG. 4A and FIG. 5, and see, for example, column

7, line 50 to column 8, line 32);

a random access memory (see, for example, RAM 34 in FIG. 4A); and

a main processor (see, for example, CPU 22 in FIG. 3) capable of replacing target code in

said target file with replacement code from said downloaded software update file (see, for

example, column 15, lines 34-56), wherein said main processor creates a first block of

replacement code in said random access memory and re-programs a first target sector of said

non-volatile memory by storing said first block of replacement code into said first target sector

(see, for example, column 12, lines 15-19, which shows creating a block of replacement code in

RAM, and column 12, lines 21-23, which shows re-programming a target sector of the non-

volatile memory with the block of replacement code), and wherein said main processor updates

first status information in a first entry in said journal associated with said first target sector (see,

for example, column 7, line 50 to column 8, line 32).

Imamatsu does not expressly disclose that said main processor is further capable of storing first target code from said first target sector in a save-area of said non-volatile memory prior to storing said first block of replacement code into said first target sector.

However, in an analogous art, Äijä teaches a crash recovery system comprising a wireless device that communicates with a server to download software updates (see, for example, the abstract), wherein the main processor is capable of storing first target code from a first target sector in a save-area of non-volatile memory (see, for example, step S22 in FIG. 4) prior to storing a first block of replacement code into the first target sector (see, for example, step S26 in FIG. 4), so as to revert back to the previous version in the event of a system crash (see, for example, column 5, lines 51-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Äijä into Imamatsu and store the existing code (i.e., first target code) into a save-area of the non-volatile memory before storing the new code (i.e., replacement code) in the first target sector.

Imamatsu in view of Äijä further teaches or suggests that said first status information comprises a second parameter indicating that said first target code from said first target sector was successfully stored in said save-area of said non-volatile memory (see, for example, Äijä, column 5, lines 25-27, which shows storing such a parameter, and column 5, lines 2-4, which shows that the parameter enables the device to determine whether the operation was interrupted before completion, and see, for example, Imamatsu, column 8, lines 24-32, which shows that the status information includes several such parameters).

With respect to claim 2 (original), the rejection of claim 1 is incorporated, and Imamatsu in view of Äijä further teaches or suggests that said first status information comprises a first parameter indicating that said first block of replacement code was successfully stored in said first target sector (see, for example, Imamatsu, column 8, lines 24-32, which shows an update completion flag).

With respect to claim 5 (currently amended), the rejection of claim 2 is incorporated, and Imamatsu in view of Äijä further teaches or suggests that said main processor is further capable of storing said first target code from said save-area back into said first target sector after a power loss in said mobile station (see, for example, Äijä, column 2, lines 49-60, and column 5, line 50 to column 6, line 5).

With respect to claim 6 (original), the rejection of claim 5 is incorporated, and Imamatsu in view of Äijä further teaches or suggests that said first block of replacement code in said random access memory is equivalent in size to a sector of said non-volatile memory (see, for example, Imamatsu, column 6, lines 15-22, and column 8, line 65 to column 9, line 1).

With respect to claim 7 (original), the rejection of claim 6 is incorporated, and Imamatsu in view of Äijä further teaches or suggests that said main processor, after said wireless communication device is restarted after a power loss, uses status information stored in said journal to identify a last successfully re-programmed sector in said non-volatile memory (see, for example, Imamatsu, column 7, lines 32-40, and column 15, lines 34-56).

With respect to claim 8 (original), the rejection of claim 7 is incorporated, and Imamatsu in view of Äijä further teaches or suggests that said main processor resumes replacing target code in said target file with replacement code from said downloaded software update file by re-programming a next sequential sector in said non-volatile memory following said last successfully re-programmed sector (see, for example, Imamatsu, column 7, lines 50-60).

With respect to claim 9 (original), the rejection of claim 8 is incorporated, and Imamatsu in view of Äijä further teaches or suggests that said journal is stored in at least a first journal sector and a second journal sector of said non-volatile memory (see, for example, Imamatsu, FIG. 5).

With respect to claim 10 (original), the rejection of claim 9 is incorporated, and Imamatsu in view of Äijä further teaches or suggests that said main processor, in response to a determination that said first journal sector is full of journal entries, erases said second journal sector and stores a next journal entry in said second journal sector (see, for example, Imamatsu, column 7, lines 50-60).

With respect to claims 11, 12, 15-22, 25-27 and 30, the claims recite limitations that are analogous to those recited in claims 1, 2 and 5-10, and are therefore rejected for the same reasons as noted above (see the rejection of claims 1, 2, 5-10).

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Yigdall whose telephone number is 571-272-3707. The examiner can normally be reached on Monday to Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Yigdall
Examiner
Art Unit 2192

/Michael J. Yigdall/